

Multispectral Thermal Imager Experiment Proposal

General Information

| | |
|---|---------------------------------------|
| Experiment title: | |
| Principal Investigator: Name and Organization: Mailing address: Phone: Fax: E-mail: | |
| Government Sponsor(s): | Collaborating Organization(s): |
| Funding Source(s) | MTI Team Collaborator(s): |

Experiment Overview

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|--|
| Description (include scientific basis, previous work, expected results, novelty, references, etc.): |
| Benefits to DOE and MTI missions:: |
| National interest (explain relevance and impact to national interest): |

Experiment Location

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|--|--|
| Location (nearest city or town, state or province, country): | |
| Scene Center: (Datum: WGS84) Latitude: ± 0.01 degrees Longitude: ± 0.01 degrees Altitude: ± 0.1 km | |
| Additional Information | |

Imaging Constraints

| | |
|--|--|
| Year, season or month: | |
| Desired dates or image frequency: (typical revisit times are 7 to 21 days) | |
| Time of image: Night <input type="checkbox"/> (~0000 hours scene local time) Day <input type="checkbox"/> (~1200 hours scene local time) | |
| Roll Angle for First Look (angle in degrees between target and nadir vectors as viewed from satellite; image quality is best for satellite roll angles up to ± 20 degrees) Maximum: degrees Minimum: degrees | |
| Weather special constraints (standard attempt is for minimal cloud cover): | |
| Other constraints: | |
| Coordination/Advance Notification: Does the experiment require advanced notice of imaging time(s) in order to coordinate other activities? No <input type="checkbox"/> Yes <input type="checkbox"/> | |

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| If yes, specify the amount of lead time necessary, the means of notification, person to be notified: <div style="text-align: right; margin-right: 20px;"> Name and Organization: Phone: Fax: E-mail: </div> | Lead Time: Means: |
|---|------------------------------------|

Imaging Requirements

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|---|--|---|--|
| Spectral bands (in micrometers): <small>(unless otherwise specified, daytime images will be all bands, nighttime images will be bands J through N only)</small> | | | |
| <u>Visible</u> A: 0.45 – 0.52 <input type="checkbox"/> B: 0.52 – 0.60 <input type="checkbox"/> C: 0.62 – 0.68 <input type="checkbox"/> D: 0.76 – 0.86 <input type="checkbox"/> | <u>NIR/SWIR</u> E: 0.86 – 0.90 <input type="checkbox"/> F: 0.91 – 0.97 <input type="checkbox"/> G: 0.99 – 1.04 <input type="checkbox"/> H: 1.36 – 1.39 <input type="checkbox"/> I: 1.55 – 1.75 <input type="checkbox"/> O: 2.08 – 2.35 <input type="checkbox"/> | <u>MWIR/LWIR</u> J: 3.50 – 4.10 <input type="checkbox"/> K: 4.87 – 5.07 <input type="checkbox"/> L: 8.00 – 8.40 <input type="checkbox"/> M: 8.40 – 8.85 <input type="checkbox"/> N: 10.20 – 10.70 <input type="checkbox"/> | |
| Number of Looks and Swath Length: <div style="display: flex; justify-content: space-between;"> <div> One Look <input type="checkbox"/> </div> <div> Swath length (km): km (standard length is multiple of 12 km up to 48 km) </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> Two Looks <input type="checkbox"/> </div> <div> Each look fixed at approximately 1:1 aspect ratio </div> </div> | | | |
| Other requirements | | | |

Data Processing and Distribution

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|---|--------------------------|-----------------|--|
| Desired data products (standard format is HDF on CD-ROM): | | | |
| Level 1A-Base | <input type="checkbox"/> | Standard | Annotated look w/cal & reg info included but not applied |
| Level 1B-U | <input type="checkbox"/> | Standard | Calibrated, unregistered top of atmosphere (TOA) radiances |
| Level 1B-R-Coreg (Recommended) | <input type="checkbox"/> | Standard | 15-band co-registered TOA radiance cube |
| Level 1B-R-Geo | <input type="checkbox"/> | Special Request | 15-band co-registered, geolocated TOA data cube |
| Level 1B-R-Topo | <input type="checkbox"/> | Special Request | Same as 1B-R-Geo, but topographically geolocated |
| Level 2-TOA | <input type="checkbox"/> | Standard | TOA reflectance |
| Level 2-WM | <input type="checkbox"/> | Standard | Water mask |
| Level 2-CirM | <input type="checkbox"/> | Standard | Cirrus mask |
| Level 2-CldM | <input type="checkbox"/> | Standard | Dense cloud mask |
| Level 2-Vap | <input type="checkbox"/> | Standard | Atmospheric water-vapor image |
| Level 2-WST-Ra | <input type="checkbox"/> | Standard | Water-surface temperature – robust retrievals |
| Level 2-Refl | <input type="checkbox"/> | Standard | Atmospherically-corrected surface reflectance |
| Other: | | | |
| Data recipient (if different from the PI): <div style="text-align: right; margin-right: 20px;"> Name and Organization: Mailing address: Phone: Fax: </div> | | | |

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E-mail:

Ancillary Data

Describe ground truth data to be collected:

Describe other ancillary data to be collected:

Explain plans to share this information with the three participating DOE labs:

Data Analysis and Formal Reporting

Describe plans for data analysis and expected data analysis products:

Explain plans to share the data products with the three participating DOE labs:

Describe formal documentation to be produced:

Explain plans to share the documentation with the three participating DOE labs:

No Foreign Involvement

MTI is sponsored by the U.S. government for research in the national interest. Only U.S. citizens shall have access to unpublished MTI data. Please list the name, affiliation, and citizenship of each individual who will have access to MTI data under this proposal:

Name(s)

Organization

Citizenship

Other

Provide other information that may be pertinent to the experiment selection and prioritization process and/or systems operations: